

Remarks

Claims 1-20 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The Office Action dated October 4, 2007 indicated an objection to the specification and the following rejections: claims 1-2 stand rejected under 35 U.S.C. § 102(e) over Hughes *et al.* (U.S. Patent Pub. 2003/0207676); claims 3-6 stand rejected under 35 U.S.C. § 103(a) over Hughes in view of Shi (U. S. Patent Pub. 2005/0079842); claims 7-9 stand rejected under 35 U.S.C. § 103(a) over Hughes in view of Shi as applied to claim 6 above, and further in view of Walker *et al.* (U.S. Patent Pub. 2005/0208919); claims 10-11 stand rejected under 35 U.S.C. § 103(a) over Takatz *et al.* (U.S. Patent No. 7,046,749) in view of Hughes and Shi; claims 15-17 and 20 stand rejected under 35 U.S.C. § 103(a) over Hughes in view of Shi and Takatz; claim 18 stands rejected under 35 U.S.C. § 103(a) over Hughes in view of Shi and Takatz as applied to claim 15 above, and further in view of Ciccarelli *et al.* (U. S. Patent No 6,498,926); claim 19 stands rejected under 35 U.S.C. § 103(a) over Hughes in view of Shi, Takatz, and Ciccarelli as applied to claim 18 above, and further in view of Hughes (U.S. Patent Pub. 2003/0207674); claim 12 stands rejected under 35 U.S.C. § 103(a) over Takatz in view of Shi and Walker; and claims 13-14 stand rejected under 35 U.S.C. § 103(a) over Takatz in view of Shi and Walker as applied to claim 12 above, and further in view of Husted *et al.* (U.S. Patent Pub. 2003/0012313).

Applicant respectfully submits that the § 102(e) rejection of claims 1-2 cannot stand because the cited portions of the Hughes '676 reference do not correspond to the claimed invention which includes, for example, aspects directed to obtaining a wideband signal power estimate of total signal power reaching the analog-to-digital converter (ADC) by measuring a signal between the ADC and the digital signal processing portion of the receiver. The cited portions of Hughes '676 teach measuring the wide-band received signal power at a point after the IF amplifiers 116 and before the base-band filters 118, instead of measuring between the ADC and the digital signal processing portion as in the claimed invention. *See, e.g.*, Figure 1. Moreover, the Hughes '676 reference specifically teaches that measuring the wide-band received signal power at the

point after the IF amplifiers 116 and before the base-band filters 118 has certain alleged advantages. *See, e.g.*, Paragraph 0008. Accordingly, the §102(e) rejection of claims 1-2 cannot stand and Applicant requests that it be withdrawn.

Applicant respectfully submits that the § 103(a) rejections of claims 3-9 (each of which is based upon the Hughes '676 reference) cannot stand because the cited portions of Hughes '676 do not correspond to the claimed invention as discussed above in relation to the § 102(e) rejection of claim 1. Applicant submits that the addition of the Shi and Walker reference do not cure any of the above mentioned deficiencies. In at least this regard, the § 103(a) rejections of claims 3-9 are improper because claims 3-9 depend from claim 1. Accordingly, Applicant requests that the § 103(a) rejections of claims 3-9 be withdrawn.

Applicant respectfully traverses the § 103(a) rejections of claims 10-14 (each of which is based upon Takatz in view of Shi) because the Office Action has provided no evidence of motivation to modify the Takatz reference. This approach is contrary to the requirements of § 103 and relevant law. *See, e.g., KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007)

Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

In this instance, the Office Action erroneously asserts that one of skill in the art would modify the Takatz reference with the cited portions of the Shi reference in order that the receiver could avoid the intermodulation interference. However, the Office Action fails to establish that the Takatz reference suffers from intermodulation interference. More specifically, the Shi reference teaches that the intermodulation interference occurs in a mixer (*e.g.*, mixer 212 of Figure 2) when the mixer receives two or more strong RF interference signals at certain neighboring channels which causes the mixer to produce intermodulation components at the same frequency as the desired signal. *See, e.g.*, Paragraph 0008.

However, the cited portions of the Takatz reference do not show any corresponding mixer that produces intermodulation components. *See, e.g.*, Figure 1.

Moreover, the Takatz reference already provides for automatic gain control and compensating for out-of-band signal components. *See, e.g.*, Figure 1 and Col. 2:35-61. Thus, Applicant submits that the skilled artisan would not have reasonably looked to Shi to address problems that are already addressed by Takatz. Thus, the Office Action fails to present a valid reason why one of skill in the art would modify Takatz in the proposed manner. Applicant further submits that, in the absence of a valid reason for the proposed modification of Takatz, the Office Action appears to be improperly resorting to hindsight reconstruction based upon Applicant's disclosure in an attempt to arrive at a combination that corresponds to the claimed invention. *See, e.g.*, M.P.E.P. § 2142. The Office Action has simply identified elements and appears to be attempting to arrange these elements in the manner taught by Applicant's specification.

In addition, it is unclear how the Office Action is proposing to combine the cited teachings of the Takatz and Shi references. The Office Action proposes to combine teachings of Shi relating to controlling the gain of LNA 210 with Takatz; however, Takatz already provides for the automatic gain control of amplifier 12. Thus, the Office Action appears to be attempting to modify Takatz to have two separate gain control systems which each control the gain of amplifier 12 in different manners. Applicant submits that such a combination would be illogical to the skilled artisan and would not result in an operable embodiment. *See, e.g.*, M.P.E.P. § 2143.01 (if a "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification"); *see also In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

In view of the above, the Office Action has not provided any evidence as to why one of skill in the art would find the asserted combination obvious as required. Accordingly, the § 103(a) rejections of claims 10-14 are improper and Applicant requests that they be withdrawn.

Applicant respectfully submits that the § 103(a) rejections of claims 15-20 (each of which is based upon the Hughes '676 reference) cannot stand because the cited portions of Hughes '676 do not correspond to the claimed invention which includes, for

example, aspects directed to automatic gain control circuitry configured to receive a wide-band signal power estimate obtained by measuring a signal between an analog-to-digital converter (ADC) and digital selectivity circuitry. The cited portions of Hughes '676 teach that automatic gain control (AGC) system 108 receives a wide-band received signal power measured at a point after the IF amplifiers 116 and before the base-band filters 118, instead of receiving the wide-band signal power estimate measured between the ADC and the digital signal processing portion as in the claimed invention. *See, e.g.*, Figure 1. Moreover, the Hughes '676 reference specifically teaches that measuring the wide-band received signal power at the point after the IF amplifiers 116 and before the base-band filters 118 has certain alleged advantages. *See, e.g.*, Paragraph 0008. Accordingly, the §103(a) rejections of claims 15-20 cannot stand and Applicant requests that they be withdrawn.

Regarding the Office Action's suggestion to add section headings, Applicant respectfully declines because the indicated suggestions in 37 C.F.R. § 1.77(b) are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 C.F.R. § 1.51(d) are only guidelines that are suggested for applicant's use. They are not mandatory, and in fact when Rule 77 was amended in 1996 (61 FR 42790, Aug. 19, 1996), Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, stated in the Official Gazette:

Section 1.77 is permissive rather than mandatory. ... 1.77 merely expresses the Office's preference for the arrangement of the application elements. The Office may advise an applicant that the application does not comply with the format set forth in 1.77, and suggest this format for the applicant's consideration; however, the Office will not require any application to comply with the format set forth in 1.77.

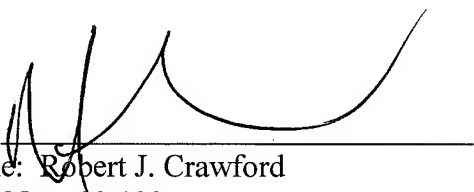
In view of the above, Applicant prefers not to add section headings.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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